conduction of heat. Each body has In these respects its own properties in reference to other bodies. Nature is sustained by their harmonious adaptations. But in. order to their operation, the bodies must have a relation to suit the action of their properties. " The world/" says Faraday, " with its ponderable constituents, dead and living, is made up of natural elements endowed with nicely balanced affections, attractions, or forces. Elements the most diverse, of tendencies the most opposed, of powers the most varied; some so inert, that to a casual observer, they would seem to count for nothing in the grand resultant of forces ; some, on the other hand, endowed with qualities so violent, that they would seem to threaten the stability of creation ; yet, when scrutinized more narrowly, and examined with relation to the parts they are destined to fulfil, are found to be accordant with one great scheme of harmonious adaptation. The powers of not one element could be modified without destroying at once the balance of harmonics, arid involving in one ruin the economy of the world/7*

Every one knows how needful the atmosphere is for the sustaining of animal and vegetable life. When air is inhaled by a living being, its oxygen unites with the carbon of the blood to produce carbonic acid; and the combination being a kind of combustion, is one source of the heat necessary to the preservation of the frame. But for the skilful composition of the atmosphere, and the greater disposition of oxygen to unite with carbon than with nitrogen, and the production of heat by the chemical combination of carbon and oxygen, it is evident that animation could riot be sustained. It appears that a slight change in the composition of the atmosphere, or even the chemical instead of the mechanical combination of its two elements, would render it no longer capable of accomplishing these ends. And it is by a

most skilfully arranged process that the atmosphere, amid the changes which it undergoes in fulfilling its offices, is still enabled to retain its purity. The germination of plants, and the respiration of animals, are constantly active in producing carbonic acid, and in setting nitrogen free. But these in excess would give the air a deadly tendency, and this is prevented by a beautiful provision, whereVy the carbon of .the carbonic acid is absorbed by plants, as being necessary for their sustenance, and in the

* Lectures on Non-Metallic Elements, **pp.** iiOO, **iiOl.**